

16. (Not Currently Amended) An apparatus according to claim 15, wherein each amplifier portion is formed from a MOS transistor.

17. (Not Currently Amended) An apparatus according to claim 15, further comprising:

lens adapted to form light into an image on the photoelectric conversion portions;

A/D converter adapted to convert signals from the signal amplifier portions into digital signals; and

signal processing means adapted to process the signals from said A/D converter.

#### REMARKS

This application has been reviewed in light of the Office Action dated January 14, 2002. Claims 1 - 17 are pending in this application. Claims 1 and 3 have been amended to define more clearly what Applicant regards as his invention. Claims 1, 4 and 7 are in independent form. Favorable reconsideration is requested.

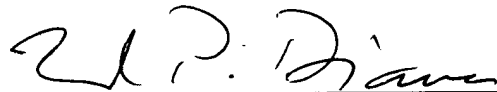
As stated above, Applicant believes that the list of Species set forth in the Office Action should be reformulated, for the following reasons. However, Applicant respectfully asserts that at least some of these claims are generic to Species II, IV and V. As described on page 20, lines 5 - 10 of the specification, Figs. 6 and 7 show sectional views of a solid-state image pickup element, shown in Fig. 5, which uses a charge transfer

element shown in Fig. 3. Thus, it is believed that Species II, IV and V are in fact a single species. Accordingly, reformulation of the Species is believed to be appropriate.

In view of the foregoing amendments and remarks, Applicant respectfully requests favorable reconsideration and early passage to issue of the present application.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



Attorney for Applicant

Registration No. 28 296

FITZPATRICK, CELLA, HARPER & SCINTO  
30 Rockefeller Plaza  
New York, New York 10112-3801  
Facsimile: (212) 218-2200

NY\_MAIN 238982v1

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. (Amended) A charge transfer apparatus comprising:
  - a semiconductor [substrate] region of one conductivity type;
  - a charge transfer region of a conductivity type opposite to the conductivity type of said semiconductor [substrate] region that is formed in said semiconductor [substrate] region and joined to said semiconductor [substrate] region to form a diode;
  - a signal charge input portion adapted to input a signal charge to the charge transfer region;
  - a signal charge output portion adapted to accumulate the signal charge transferred from the charge transfer region; and
  - a plurality of independent potential supply portions adapted to supply a potential gradient to said semiconductor [substrate] region,wherein the signal charge in the charge transfer region is transferred by the potential gradient formed by said plurality of potential supply portions.

3. (Amended) An apparatus according to claim 2, wherein the charge transfer region is buried in said semiconductor [substrate] region and forms a buried diode together with said semiconductor [substrate] region.